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BUREAU
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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

AUG 7 1920

REPORT FOR WEEK ENDING AUGUST 7.

Akron:

Practically a full week was spent at harvesting with the result that all of the rotation small grain crops and all of the Cereal Project small grain crops are in the shock. All of the grain was dead ripe when cut, but practically no shattering occurred. Two small increase fields of spring wheat and the two plats of winter wheat on the Sheep Rotations remain to be harvested besides the Cereal Nursery.

Two small showers occurred during the week which will be of benefit to growing vegetation. Millet and sorgo varieties are looking especially good. All the rotation fallow plats were disced to control weed growth.

Station was visited during the week by Dr. E. A. Waller of the Botany Department of the Ohio State University and by Dr. McCarty of the Botany Department of the Colorado State College, the latter here in the interest of the Sheep Experiment.

Maximum temperature 87, on the 1; minimum 57, on the 3 and 8; precipitation .23 inch.

Ardmore:

There has been no precipitation to relieve the long continued drought. Since the 20th of June the total precipitation recorded at this station has amounted to .67 inch. The maximum temperature for the week was 93, minimum 53.

Notwithstanding the unusually dry weather, crops are doing exceptionally well. It may be said, that the crops are apparently deriving considerable benefit from moisture stored up in the soil at a depth below three feet. It has been our experience at thit station during past seasons that all of the crops secured most of their moisture in the first three feet of the soil. The conditions seem to be reversed this season, as there is very little moisture in the first three feet that is available for plant growth.

The harvest of wheat and oats on the station is practically completed. The small grain crops are exceptionally good. It is believed that wheat will yield from 35 to 50 bushels per acre, and oats will yield correspondingly well.

Corn and cane are doing very well, and have not suffered to any great extent for their lack of moisture. Sunflowers that are being grown for silage have made an excellent growth, but probably will have to be cut within the next week.

Great damage has been done to crops in the eastern part of the country, and in western Nebraska, during the week from heavy hail storms. Hundreds of acres of esceptionally good wheat which was just ready for the binder were completely destroyed. There has not been any hail in the country immediately surrounding Ardmore.

Mr. Sam Sloan, County Agricultural Agent and his wife spent several days during the week visiting the station. Mr. A. C. Dillman was here on August 4 and 5. Mr. J. T. Sarvis returned to Mandan during the latter part of the week.

Belle Fourche:

The weather during the whole week has been clear and warm. Grain has ripened rapidly. All of the oats and barley are in the shock and the wheat is now being harvested. All grains except barley are somewhat shrunken on account of drying up before they had ripened.

The corn and sorghum have not commenced to suffer from drought yet.

Belle Fourche, continued:

A good fodder yield of these crops is assured, and with an inch or two more of rain the corn will produce a high grain yield.

The rust damage in this section is very extensive. All except a few fields of bread wheat are severely injured. Many fields will not be worth harvesting. Drum wheat has rusted a little, but the damage is hardly noticeable.

Maximum temperature 93, minimum 54; precipitation 0.

Big Spring:

Most of the week has been cool but without any precipitation to speak of, though a part of the county got good rains the middle of the week. The crops are holding up well, but are maturing rapidly. We will harvest the peas in the variety plats and rotations next week. The varieties, black amber, red amber, and freed sorghums are about ready to harvest and will be cut soon. The station work this week has consisted in killing weeds, watering shrubs, and trees about the grounds and cleaning up around the buildings. Today, Saturday, Big Spring is having a big barbacue and a large crowd is expected from out of town. A special train will be run from Fort Worth and Dallas to bring in the visitors from those points. Twenty thousand pounds of beef has been secured for the barbacue to feed the fifteen thousand people that are expected to be there on that day. On Sunday the out-of-town visitors will be taken to the oil wells south of town where luncheon will be served at noon.

Maximum temperature 98, minimum 64; wind velocity 4.9 miles; evaporation 2.23 inches; precipitation .03 inch.

Dalhart:

Weather conditions for the week have been favorable to crop growth. One shower occurred amounting to .34 inch. This helped the crops considerably as the following days were moderate.

Field work for the week consisted of mowing and cleaning up of all roadways, hoeing, counting of crop stands, and threshing winter rye.

All field crops are growing rapidly and many are either heading or in the boot. Some will do to harvest within the next week or two, depending upon weather conditions. Millet, sudan, and red amber in the drilled plats will soon be ready to harvest.

Birds are flocking in and beginning to work on the headed grain. Several flocks of black birds have already visited the station but were driven away after part of their number were killed. Sparrows are giving the most trouble at present, but by continued watchfulness and shooting it may be possible to keep them from damaging the plat work too much. They have always done considerable damage to the first dates, but thus far this year they have been scattered until no damage has resulted to date.

Maximum temperature 97, minimum 57; precipitation .34.

Dickinson:

Hot, dry weather has prevailed all week and grains have matured very rapidly. Harvesting of wheat, oats, and barley on the rotations has been completed, also, the oat and barley varieties and several of the wheat varieties in the cereal project. Increase fields of Hannchen and Swan Neck barley, Early Mountain and Golden Rain oats, Kubanka wheat, and a field of flax were harvested. Flax varieties are ready to cut. All grains have a rank growth of straw, but the grain will be rather light and shrunken due to lack of sufficient moisture during the past three weeks. Yields will probably be about the aver-

Dickinson, continued:

age at this station. Corn, millet, potatoes, etc., are showing marked effect of drought.

Messrs. T. R. Stanton, J. C. Brinsmade, and W. E. Brentzel of the Office of Cereal Investigations visited the station during the week.

Maximum temperature 93, minimum 51; precipitation .09 inch.

Edgeley:

The past week has been very hot and dry. The hot, dry weather is doing considerable harm to the corn crop. Unless rain occurs soon, very few ears will form on the corn. All the oat plats have been harvested and many of the wheat plats will be ready to cut by the first of the week. The hot weather is doing more damage to all classes of crops than all other factors combined. The millet crop in this district will be practically a failure.

Maximum temperature 93, minimum 41; precipitation .01 inch.

Garden City:

Two good rains, one of .92 inches and one of .77 inches came at a most opportune time this week. The soil was getting very dry, and the sorghums and corn were beginning to suffer for the lack of moisture. At present writing the crops are growing fine. All crops throughout the valley are showing good prospects for bumper yields this fall. The milo and kafir plats are nearly all headed out, and the corn has begun to tassel.

The millet plats were cut this week, and were exceptionally good this year. The first cutting of sudan grass was hauled in this week; the best plat made 2.2 tons of cured hay per acre.

Maximum temperature 86, minimum 58; total precipitation 1.89 inches.

Huntley:

The chief occupation during the past week was rogueing of the miscellaneous plats, hoeing of scattering weeds in the corn rows, and cultivation of garden and bean plats. The flax plats were gone over and Russian thistles were removed from the plat borders preparatory to harvest.

Oats, barley, and flax are about ready for the binder, but spring wheat is still green. Spring wheat is drying up seriously and the present outlook is that the crop will be light due to poorly filled grain. Corn is fully tasseled and silked. To date it shows no indication of drought. Hay crops are making practically no second growth, and it is doubtful if a second cutting will be secured.

Grasshoppers are unusually numerous this year, but grain crops are so far advanced that they cannot be much damaged. There is a possibility that the corn will be attacked after the grain crops are cut.

Threshing is in full swing throughout the dry-land area in this section. Yields are reported fair to excellent, according to the farming methods employed, and the hail damage suffered by the different farmers. Much grain is being "combined" on the larger ranches, as ripening has been unusually rapid and uniform this year.

Maximum temperature 95, minimum 53; precipitation .03.

Judith Basin:

The warm, dry weather has continued unbroken except for a light shower of .23 inch on the 6. All crops are suffering seriously from lack of moisture.

Judith Basin, continued:

Barley on the rotations has made no growth whatever and still remains partially headed out. Spring wheat and oats are drying up rapidly and winter wheat is nearly ready to harvest. Corn is curling badly and sunflowers and potatoes are wilting. Flax, however, is faring remarkably well. There is a great difference between the early and late seedings of the small spring grains. The former will produce fair yields, but the yields from the latter will be very light unless a heavy rain is received immediately.

Mr. Stanton, W. B. Brentzell, and J. C. Brinsmade of the Cereal Office were visitors at the station during the week.

Maximum temperature 88, minimum 47; precipitation .23 inch.

Lawton:

A shower of .84 inch Thursday, August 5, broke the drought which has existed here for over a month. While this rain was followed by a cool day, so practically all the water was saved, we still need at least that much more precipitation.

During the week we have picked and mowed a number of cowpea plats, rogged many sorghum plats and cut nine corn plats.

Soil moisture samples were taken early in the week. The first foot of No. 275, plat A, fallow contained 17.4 per cent, while the first foot of plat D, kafir, contained only 6 per cent. The second foot contained 21.5 per cent and 15.2 per cent respectively.

On a trip to the northern part of the county this week, one was impressed with the improvement crops had made the past month in spite of the drought. Cotton is rather late, but looks well.

Messrs. Satterthwait and Horton spent a day at this station this week, coming by automobile from Wichita, Kansas.

Maximum temperature 91, minimum 67.

Mandan:

Horticulture.

The garden plats have again been hoed and cultivated. Harvesting of various vegetables has been made every day, and notes taken in regard to quality and yield.

About three bushels of Prunus armeniaca and three pecks of Amygdalus pedunculata have been picked for seed.

Agronomy.

Wheat and barley in the rotations have been harvested. The plats are very badly infested with Russian thistle, which seriously interferes with harvesting. Some of the fallowed plats one would judge to be fully 90 per cent thistle with other weeds.

The rain of 1.07 inches which fell on July 31, has practically been used up by cultivated crops, and those suffering just previous to this rain are again showing signs of moisture shortage. There is markedly more suffering of corn on fall plowing in the rotations than on spring plowing. Corn on fallow does not show any signs of suffering yet.

Maximum temperature 93, on the 3; minimum 50, on the 6; precipitation 0.

Arboriculture.

Hoeing and weeding has continued the past week in all tree fields and blocks.

Caragana seed was picked, but only about five pounds of cleaned seed was obtained, whereas last year we picked 60 pounds cleaned.

Taratarian maple seed is later than usual this year, but an abundant

Mandan, continued:

crop of excellent seed will be obtained. Our Russian olives are also bearing for the first time, and a large quantity of seed is expected from these. Chokecherry and buffalo berry will also be picked later for planting and using for shelterbelt purposes.

Mr. Emerson has finished inspecting plantings in North Dakota, and part of eastern Montana; Mr. Person has finished Wyoming, and the Black Hills district of South Dakota, and is proceeding to the Pierre district. Mr. Cobb returned from inspecting shelterbelt plantings in southern Saskatchewan. He also visited the Indian Head station, from which most of their planting stock is sent out. The return was made through Regina, Moose Jaw, and south into Montana. Much valuable information was gained as to prairie conditions in those sections, and tree plantings for that part of Canada. Many interesting features were observed in their methods of handling their office work.

The two cars from the War Department, loaned through the Office of Public Roads have just arrived, and both Mr. Emerson and Mr. Person will be called in to get them for further use in the field the remaining part of the summer.

Visitors this past week included Mr. W. E. Brentzel, from the Office of Cereal Investigations, and Mr. G. H. Wiggin, Assistant Superintendent of the Cloquet Forest Experiment station (Minnesota).

Sheridan:

The weather has continued hot and dry throughout the week. Harvesting of winter wheat was completed. Harvesting of oats and barley was also completed. Harvesting of the three last dates of seeding in the dates has not been completely harvested. Flax in the varieties was cut yesterday. There was a fair stand of flax, but Russian thistles had grown up rapidly in these plats during the last month. The block of pelissier wheat was harvested during the week. All of the rates of seeding of spring wheat and the dates of seeding with the exception of the later dates was harvested. The most of the varieties of spring wheat will be ready to harvest the first of the week, while that in the rotations is also ripening quite rapidly.

Early fall plowing of the winter wheat M.C. series is being done today.
Maximum temperature 91, minimum 50; precipitation 0.

Tucumcari:

A small rain amounting to .12 inch occurred on the 5, while a good one amounting to .64 fell on the 3. With these two rains, crops have made a good showing. With the present prospects this station will record a bumper crop this year.

During the week the last cultivation was given the crops. They are so far along that it will be impossible to go over them again. There are still a few weeds to contend with, but before long these will be out of the way. There is just a little hoeing remaining to be done in the south field and a little in the north field.

Since the two rains, the pasture is looking much better. It was getting pretty dry and the grass was looking pretty sickly. One more rain will be needed at a later date in order to insure good winter pasture. Crops in the surrounding country are looking good with indications of a good yield.
Maximum temperature 95, minimum 61; precipitation .76 inch.

Woodward:

The weather for the past week has been somewhat of a relief to the crops, although we have not had enough rain to relieve the situation to any extent. We also have had a great deal of cloudy weather with very little wind movement. We have had a total of .45 inch of precipitation falling on three different days, the greatest amount falling any one day being .28 inch. Most of the crops look considerably better than they did a week ago, but still show lack of moisture and are growing very slowly. Most of the kafir and some of the milo is about fully headed now.

Work during the week has been mostly picking grapes, cleaning up fence rows, cultivating tree rows, and various odd jobs.

Our heaviest yield on the grapes for nine vines of the variety is 15.2 pounds, while a yield of 23.5 pounds was received from a single vine. These yields were made by the Manito; other varieties have made yields on down to a single bunch of less than .1 pound to a vine. Our best yield on the wheat which was threshed a couple of weeks ago was 24.7 bushels per acre on 156-B and rye 9.7 bushels per acre on CC-F.

Maximum temperature 103, July 31; minimum 58; average hourly wind velocity 3.7 miles per hour; evaporation 1.188 inches; precipitation .45 inch.

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U. S. DEPARTMENT OF AGRICULTURE.

AUG 14 1920

REPORT FOR WEEK ENDING AUGUST 14, 1920.

Akron:

All of the harvest has been completed, including the Cereal nursery which was finished today. The summer fallow field and the green manure rye field of the sheep pasture rotation were plowed this week. It was necessary to replow the green manure rye field because the sheep had not held the weeds in control. The sheep will be turned in on the barley stubble early next week, as under present plans the barley from these fields will be threshed within the next few days. All the fallow strips were disked as well as both orchards. Weeds were mowed around the fences and station buildings and part of the rotation roads graded.

Two painters started to work on the station buildings Monday.

Maximum temperature 90, on the 11; minimum 42, on the 13; precipitation .43 inch in four showers in four separate days.

Big Spring:

The drought was broken this week by a good rain on the night of the 11. The weather has also turned much cooler, which is a great relief from the sultry weather we have had for some time past. The peas in the rotation plats were harvested the fore part of the week. As we did not get to haul them in before the rain, they will be somewhat damaged by the wet weather. We have had quite a number of visitors to the farm each week, and most of them seem to be well pleased with the crop prospects this year. The rain we had was general and covered a large territory in this section of Texas.

Maximum temperature 96, minimum 58; wind velocity 4.9 miles; evaporation 2.07 inches; precipitation .95 inch.

Colby:

The past two weeks has been spent in finishing the threshing of the plats, plowing, cultivating the late sorghums, and cultivating fallow plats. Weather conditions have continued very favorable for growing crops and corn gives promise of a good yield throughout the county. The days have been warm but the nights have been cooler than usual, the minimum temperature for the past week being 41. Precipitation for the past week was .19 inch and for the previous week 1.55 inches. The total precipitation since April 1 has equalled the average annual precipitation, and accounts for the excellent crops grown in this section this year. The wind velocity has also been very low and more difficulty has been experienced in keeping the stock supplied with water during the past ten days than at any time during the past three years.

Threshing throughout the county has been delayed by rains and many machines have not started up yet, but expect to start next week. Contrary to the usual custom many farmers are building granaries and will store their wheat this year until the car shortage becomes less acute.

Because of the heavy crops, and high wages, the usual labor troubles have developed with transient help on the station, and the office building is being completed as rapidly as possible so that it may be used as a tenant house for the present. By keeping another married man on the station, we hope to have less trouble in getting the work done.

Dalhart:

The past week the weather has been quite cool. It was too cool for proper and quick development of the field crops. If this cool weather stays with us the crops will be delayed considerably in maturing.

Dalhart, continued:

Crops in general are looking fine. Nearly everything is either headed or heading. Moisture conditions are quite favorable at this time, having received a rain of .66 inch this week. The main trouble with the crops is going to be in keeping the birds from destroying the yields. They are thick now and are working on the earliest crops when not being shot at. Keeping the birds out of the crops requires shooting. Sparrows are giving the chief trouble now, the black birds having been driven away by the shooting.

Field work for the week has consisted of plowing in the general field from which a crop of oats was removed recently. Plowing for a few varieties of winter wheat was finished today. Soil sampling was done at the regular period. Sudan on Rotation 83 was turned under for green manure.

Messrs. Hallstead and Swanson of Hays, Kansas and Keating of Garden City, Kansas were station visitors this week.

Maximum temperature 93, minimum 48; precipitation .66 inch.

Dickinson:

A good rain fell during the week, greatly aiding growing crops but did not penetrate deep enough for plowing. Corn is now in the roasting ear stage and filling rapidly. Millet has improved much in appearance but was greatly injured by the dry weather and will produce only a light yield of hay. Harvesting of grains is about completed in the locality and some threshing probably will be done during the coming week. A number of small experimental silos were filled during the week with a variety of materials.

Maximum temperature 94, minimum 41; precipitation .98 inch.

Edgeley:

The weather has continued hot and dry for the past week. Corn is suffering for the want of moisture. All the wheat has been harvested. This completes the harvest at this station.

The hot, dry weather is causing the leaves to die on the trees.

Maximum temperature 96, minimum 43; precipitation .27 inch.

Huntley:

Oats and barley were cut during the week. Yields will be light for these crops, as they filled poorly. Spring wheat and flax are ready for the binder and will be harvested in the near future. Flax yields will be very good but spring wheat will be light. Corn continues to make good growth in spite of the lack of precipitation.

Director F. B. Linfield, Prof. P. V. Cardon, and Dr. Welch of the Montana Experiment station, and Director F. D. Farrel of the Kansas station visited the farm during the week.

Maximum temperature 95, minimum 53; precipitation .51 inch.

Lawton:

Precipitation of 1.23 inches since August 1 and a number of cool days have resulted in a marked improvement in station crops.

Several plats of cowpeas in rotations have been cut and the remainder will be harvested early next week. Cutting and shocking of corn was completed early in the week. Several grain sorghum plats will be ready to harvest within a few days.

Carl Williams, editor of the Farmer-Stockman of Oklahoma City, visited the station this week. He was in Lawton for the purpose of addressing the

Lawton, continued:

Chamber of Commerce on the subject of the Oklahoma Cotton Growers' Association, an association which is expected to include among its membership practically every cotton grower of the state by next spring. When organized it will number at least 30,000 members; handle a minimum of 300,000 bales annually; and make it possible for the farmers to sell direct, cooperatively to the spinners. This plan has been approved by the Bureau of Markets and is similar in organization and scope to the American Cotton Growers' Association.

Maximum temperature 93, minimum 57; precipitation .38 inch; average wind velocity 3.4 miles.

Mandan:

Horticulture.

The early sandcherries have been picked. About two bushels, mostly of native origin, were saved for seed, while the rest, mostly Professor Hansen's selections were used for various culinary purposes. The variety named Sioux is very good, both for pies and sauce, being entirely free from any bitterness and acidity. It is also very early, being the first one to ripen at this station.

The second generation of our tomato crosses are now beginning to ripen. The dry season has damaged a good number of them, but some are showing up fine in spite of this handicap. A number of selections have been made and more will be made next week for further improvement.

The demonstration garden is still yielding fine; the main crop now is sweet corn, tomatoes, cucumber, and summer squash.

Some work has been done on the grounds, weeding, pruning, etc.

Agronomy.

Harvesting of all cereal crops in the rotations, varieties, and seed blocks was completed early in the week. Failure plats in the rotations were mowed.

Corn in the rotations is mostly poor and gives very little promise of making enough ear development to be worth husking. Shortage of soil moisture and hot weather at tasseling and silking time, checked development to such an extent that subsequent rains failed to bring about much revival.

Maximum temperature 95, on the 9; minimum 45, on the 12; precipitation 0.59 on the 11.

Aboriculture.

Hoeing has continued in all tree fields, specie blocks, and the main shelterbelt. Spraying for aphis was done in the poplar fields. Discing was done in fallow fields.

Two bushels of chokeberries were picked and the seeds will be used for seedling trees in shelterbelt work. Seven beds of caragana seed were planted.

Mr. Emerson returned to fix up the two cars received from the War Department that will be used for shelterbelt inspection work the rest of the summer. He will leave to finish his inspection work Monday. Mr. Person is expected in and will as quickly as possible leave again with the other car.

North Platte:

Threshing on the station was finished yesterday, August 13, only a few yields have been calculated. For the most part these were better than we expected. On the bench Kanred wheat averaged 40.3 bushels per acre, Kharhov 36.5, and Turkey Red 33.0. Several plats of oats yielded above 50 bushels per acre.

North Platte, continued:

Weather continues dry. Less than one-half an inch of rain has fallen in August to date. Corn is not suffering greatly except in local areas. On the night of August 12 the temperature went down to about 38 degrees at the bench station.

Heavy frost occurred over a considerable area, beginning about eight miles southeast of the station. Corn was badly damaged in the lower areas. Some fields will be almost a total loss.

Sheridan:

The weather has been somewhat cooler during the past week, and there have been a few scattering local showers. Not enough rain has fallen around here to be of much benefit. Corn and other forage crops, and late grains would be helped considerably by a good rain.

All of the grain except the last date of seeding of oats and barley, and the last two dates of seeding of spring wheat, and the rotation flax, have been harvested. The flax will probably be ready to cut the first of the week. Barley seeded as a nurse crop with alfalfa and sweet clover was cut yesterday.

The alfalfa ground was mowed over yesterday. The second crop was a failure and no yields were recorded, but it was necessary to cut it to prevent the few plants at the ends of the rows and on the edges of the plats and in the ravine going to seed. There was a good growth in the ravine, but there has been considerable wash there from rains which would obviate any effect from tillage or variety.

Maximum temperature 93; minimum 48; precipitation .32 inch.

Tucumcari:

Growing conditions have been quite favorable during the week except for a couple of days which were cool. A little rain seems to fall at odd times, so as to keep the crops looking good. Everything is either headed or heading with good prospects.

Field work for the week has consisted of hoeing and cultivating in the south field; plowing under sudan and cowpeas for green manure on the two year rotations (Nos. 296 and 299). While it was too wet to work in the field the men cleaned up around the buildings. Water was hauled to the cattle twice during the week. Roadways in the center field were measured off and mowed.

Station visitors this week were Mr. Hallstead and Mr. Swanson of Hays, Kansas, and Mr. Keating of Garden City, Kansas.

Maximum temperature 95, minimum 61; precipitation .48 inch.

Woodward:

Our drought has been broken by nearly an inch of rain in the last week, consequently all of the crops are looking considerably better. Cowpeas stood the dry weather about as well as anything and are now ready to be cut for hay. Milo and broom corn seemed to suffer the most, but both crops are doing well now. Most of the broom corn on the rotations has headed; milo on most of the plats is putting out suckers and will mature rather late; kafir is fully headed and is looking very well.

Four or five hundred pounds of grapes have been picked during the week; two plats of cowpeas have been plowed under for green manure. Other work has consisted of cleaning up fence rows, cultivating ornamental plantings, hauling dirt, and fanning wheat, and other odd jobs.

On the 13 the Woodward Chamber of Commerce visited the station for about

Woodward, continued:

two hours. About 100 people were present.

Maximum temperature 95, minimum 52; average hourly wind velocity 4.1 miles per hour; evaporation 1.626; precipitation .95 inch.

Judith Basin:

The fore part of the week was very cool and cloudy and the summer drought was broken by frequent rains totaling .68 inch. Due to the dry condition of the soil and the advanced stage of growth of the small spring grains, however, it is doubtful if the rain will be of much benefit to anything except corn and potatoes.

Harvesting of oats and winter wheat has just commenced. Hannchen barley in the increase fields and on the rotations still remains partially headed out, but is commencing to ripen. Spring wheat is beginning to turn color and corn is tasseling.

Director F. B. Linfield visited the station on the 12.

Maximum temperature 86, minimum 45; precipitation .68 inch.

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AUG 2 1920

REPORT FOR WEEK ENDING AUGUST 21, 1920.

Akron:

Threshing was started on the station on Tuesday and and progress was being made after the usual starting troubles, when a rain on Thursday evening interfered with operations. Friday and Saturday mornings were spent in rearranging, sorting, and discarding old seed stocks. The thresher is in operation again this afternoon.

The rotation oats and barley were threshed before the rain. Oats yielded from 17.7 bushels on Rotation 5, to 61.7 bushels, on Rotations 22 and 30. Barley yields range from 19.6 bushels on MCA to 38.4 bushels on Rotation 92.

The sheep were given their monthly weighing today. They were also turned in on the wheat stubble pasture.

Maximum for the week 91, on the 19; minimum 49 on the 21; precipitation .52 inches.

Dalhart:

Weather for the past week has been somewhat threatening, but very little rain fell. One shower occurred which amounted to .33 inch. This small shower helped out somewhat as the weather has been cool, thus preventing rapid evaporation. Several days of cool, cloudy weather has prevailed.

Crops are all coming along in fine shape. Some harvesting has been done in the Forage work. The sudan in drilled and row, and red amber in drilled, and millet drilled have been harvested. It will not be long until the first date of red amber will be ready to harvest.

Work for the week has consisted of plowing the fall plowed plats on Rotations 58 and 59, and turning the sudan under for green manure on Rotation 83. One man has been busy all week with one horse and a 14-tooth harrow going through the general field crops. The rye that was recently threshed was fanned this week, while the rain was on the rye has been sold for seed. After taking out wheat seed that will be needed for this and the Tucumcari stations with about two sacks extra there remained 2155 pounds to sell. The rye averaged about 20 bushels to the acre. Soil samples were taken at the regular period.

Maximum temperature 92, minimum 54; precipitation .33 inch.

Edgeley:

Dry, windy weather has continued through the week, with cool nights. Corn is suffering badly for the want of rain. Threshing will begin on the station some time next week. The ground is becoming so hard and dry that it is almost impossible to drive the tubes into the soil without damaging them by so much hammering.

Maximum temperature 94, minimum 37; precipitation .11 inch.

Dickinson:

The week has been hot and dry. Threshing was begun on the 19, and wheat, oats, and barley on the rotations completed. Wheat averaged 19.2 bushels and oats 38.7, just about the average yield for the station. Rotation 2 produced a maximum yield of 65.6 bushels of oats and Rotation 19 the maximum of wheat, 25.8 bushels. Wheat on corn ground yielded almost as much as fallow

Dickinson, continued:

but oats yielded relatively low on corn ground. Spring and fall plowing have been about equally productive at this station, but this year spring plowing was much better. The quality of both oats and wheat was much better than expected.

Belle Fourche:

The weather continues dry and warm. Corn and sorghum have shown no signs of suffering as yet, though the supply of available moisture in the soil must be nearly exhausted.

All harvesting of dry land grains is now completed. Threshing will be started as soon as a sufficient number of men can be spared from other work.

Harvesting is well along in this section of the country, and some threshing has been done. Most of the wheat is of poor quality because of the prevalence of stem rust. Late planted kurbanka durum wheat has rusted badly.

Maximum temperature 92, minimum 46; precipitation .8 inch.

Big Spring:

Most of the week has been wet and cool. The drought has been definitely broken and we now have plenty of moisture in the soil to mature all crops this season. We now need a few weeks of dry weather so we can get the matured crops harvested and threshed. Broom corn in the c.c. plats was harvested this week. All plats made a fair crop of brush with the exception of plats A and G. The cowpeas harvested for hay last week is still in the field and on account of so much rain will not be worth much for hay.

Maximum temperature 91, minimum 63; evaporation .82 inch; wind velocity 4.1 miles; precipitation 3.31 inches. The total precipitation for August 4.45 inches, 2.25 inches above the average for this month.

Judith Basin:

The past week has been characterized by hot days and very cool nights, the highest temperature occurring this year being recorded on the 16, while the minimum temperature for the summer was recorded on the 18. Killing frosts on the 18 were reported from several localities nearby, but the temperature on the station did not fall below 35.

Harvesting of early oats and winter wheat on the station was completed during the week. Spring wheat and barley are ripening rapidly, but most of the latter has not fully emerged from the boot.

Mr. N. F. Woodward arrived on the 18 to attend to work on the Forage Crop Project.

Maximum temperature 91, minimum 35; precipitation, Trace.

Huntley:

The last of the small grain plats are being cut today, which completes a week devoted chiefly to harvesting. Though most of the grain has been cut less than a week, the stubble is already becoming green with a growth of Russian thistle. Other than the harvesting, the principal work has been the cleaning up of scattering weeds on the fallow and corn plats and in the garden and miscellaneous plantings.

Threshing of fall grain has been practically completed in the neighborhood. Yields were generally good and the quality of grain excellent.

Maximum temperature 100, minimum 42; precipitation 0.

Lawton:

All cowpeas in rotations and the increase series were cut this week, but rain on three different days has prevented them from curing. About 20 plats of the most advanced grain sorghums have been cut and shocked. Birds are very bad this year and the injury to early plats is very high.

Messrs. Chilcott and Sieglinger of Woodward, Keating of Garden City, and Hallstead and Swanson of Hays arrived Tuesday evening, after making the trip from Woodward in Mr. Chilcott's car. Wednesday was spent in going over the station and in taking a drive through the northern and eastern portion of the county. The party began their return trip to Woodward Thursday morning.

Maximum temperature 92, minimum 57; precipitation 1.63 inches.

Mandan:

Horticulture.

The picking of sandcherries was continued the first two days of the week; one half bushel of clean seed has been secured, which will be used for experiments in plant propagation.

The Opata plums are all nearly ripe, and some of the crop has been picked. This hybird plum seems to be very valuable for this section of the country, as it yields abundantly even in a very dry season; is a regular bearer; and begins fruiting very soon after planting. The Oziya, another of Professor Hansen's introductions, also appears very promising.

The work of the selection among the tomato crosses has been continued, although the crop is burning up badly and is not nearly as promising as it was a week ago. The celery was hilled up for the second time, and onions have been broken down to insure an even ripening of the crop. Weeding has been continued right along, as the dry weather does not seem to have any checking on this crop.

Arboriculture.

Hoeing in all fields has continued, as well as the cleaning out of all caragana hedges. About two bushels of chokeberries were picked and seeded, and will be planted next spring as a trial for shelterbelt trees.

Mr. Emerson left Monday with one of the new cars to finish the inspection work on his territory, and Mr. Person returning from South Dakota, later left with the other.

Maximum temperature 100, on the 18, minimum 39, on the 21;

Mr. M. J. Dorsey, accompanied by Mr. Beaumont, both of the University Farm, Saint Paul, Minnesota, and Mr. L. H. Dewey of the Office of Fibre Plant Investigations, visited the station during the week.

North Platte:

The drought which has extended since early July was broken by a rain of 2.80 inches on August 19. Larger amounts are reported from several nearby stations. This rain will be of immense value to the corn crop pasture, etc.

Early fall plowing which has been delayed on the account of the extreme dryness of the soil will now be done immediately. It has been necessary to mow all D.L.A. plats to check the growth of Russian thistles.

Scottsbluff:

The greater part of the past two weeks has been cool and cloudy. Less than half an inch of precipitation has fallen since the first of the month. The cool weather has retarded evaporation a great deal and all crops are looking fine. Soil moisture samples taken on the MC series of corn indicate that there is still considerable moisture in the soil. Corn is far enough

Scottsbluff; continued:

along that a good crop is practically assured on all plats.

A very light cutting of alfalfa and sweet clover was obtained on second cutting. Other work consisted of mowing weeds along border plats and cutting them out of the corn. All fallow plats were disced to keep down weed growth.

The engine and thresher were put in repair and threshing of small grains will start the coming week.

Station visitors included Mr. A. C. Cooley of the Office of Demonstrations on Reclamation Projects, and Prof. M. H. Swenk, State Entomologist from the Nebraska Experiment Station at Lincoln.

Maximum temperature 89, minimum 45; precipitation, Trace.

Sheridan:

The hottest weather we have had yet this summer was recorded during the first half of the week, while the last three days have been quite cool for this period of the year. The weather still continues dry, although there was one light shower during the week.

A large part of the week was devoted to getting Russian thistles out of the forage crops where they have grown up very rapidly during the last month, and where they would have caused trouble in harvesting later on. All of the flax was harvested during the week. There was a good stand of practically all of the flax, but Russian thistles have grown up rapidly in it during the last month. It was necessary to take them out from the edges of some of the plats before they could be harvested. The sunflowers were harvested yesterday at the stage for putting in the silo. There was very little difference in the yields of those thinned to 12 inches and those thinned to 18 inches in the row, the yields being 14920 pounds and 14830 pounds per acre respectively.

A part of the old grain bins were torn out in the second floor of the implement shed, and new bins constructed to take care of this year's crop, and the floor braced to take care of the load.

Tucumcari:

The weather here has been quite favorable for crop growth during the week. A fine rain was recorded during the week which helped things a great deal. The weather has been quite cool which has favored the crops.

Everything is looking good and making good headway. The millet was mowed and cocked this week in time to get rained on. The field work has consisted of hoeing and cleaning up around the fields and mowing all the roadways. Everything had to be staked off before mowing as the crops were planted to the center of the roads and cultivated across the roads. This leaves the roadways in stubble rather than bare which will help out when the wind starts to blow. Soil samples were delayed a little this week on account of the rain, but were taken later in the week.

This week has been a busy one in Tucumcari as the Sixth Annual Roundup was held from the 18 to the 21. There was a large attendance for this affair.

Woodward:

The weather for the past week has been cloudy most of the time with over an inch of rain, the greater part of which fell one night. This fell very slowly and there was practically no run-off. All of the crops are looking well now, but are putting out a good many suckers, while a few of the earlier heads are nearly mature.

Woodward, continued:

Work during the week has consisted of cutting cowpeas, which were gotten down just in time to get rained on; part of them have dried out enough to be raked. Picking of grapes and several odd jobs were also done.

Mr. Keating from Garden City, Messrs. Hallstead and Swanson from Hays were visitors at this station on the 15 and 16. They left here on the afternoon of the 16 with Messrs. Chilcott and Sieglinger of this station by automobile to visit the Newton field station, returning here on the 20. Mr. Chilcott reports excellent crop conditions in all of the territory passed through on the trip.

Maximum temperature 90, minimum 61; average hourly wind velocity 6.3 miles per hour; evaporation 1.518; precipitation 1.20 inches.

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OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

AUG 28 1920

REPORT FOR WEEK ENDING AUGUST 28, 1920.
(Except where otherwise indicated)

Akron:

Threshing is about completed at the end of this week. The rotation spring and winter wheat has been threshed with the exception of about eight plats of spring wheat. A rain of .38 inches last night has made it impossible to finish these plats today.

Fall plowing was started today, the ground turning up dry.

There are many inquiries being received concerning Kanred wheat. The station has sold in the neighborhood of one hundred and fifty bushels. The indications are that there will be a large acreage of this variety planted this fall if seed can be secured.

Maximum temperature for the week 88 on the 24th; minimum 45 on the 25th; precipitation .38 inches.

Ardmore report for week ending August 21:

The drought has continued with practically no relief. The only precipitation during the week was .06 inch on August 19th. The maximum temperature for the week was 92, minimum 40.

During the week a field of 12 acres of Sun Flowers were harvested for silage, the yield was 4.7 tons per acre. Corn and cane are not dry enough to put in the silos but these crops are maturing very rapidly.

Ardmore:

The long continued drought was broken on the night of the 27th by a rain fall of .85 inch. This rain comes too late to be of any material benefit to crops, although it will be of some benefit to late corn and cane. The total precipitation for the month of August has been 1.48 inches. The six year normal for the same month was 1.46. The maximum temperature for the week was 92, minimum 40.

All plots of small grain including wheat, oats, barley and rye were threshed during the week. The yields have not yet been complied, but it is safe to say that the average yield of spring wheat will be about 25 bushels per acre, and winter wheat will be about the same. The average yield of oats probably will be an excess of 50 bushels per acre. A field of 80 acres of oats is yet to be threshed.

It will be be necessary to start cutting corn for silage about next week. Cane crops will also have to be cut within the next or ten days.

Visitors during the week were Mr. Sam Sloan, County Agricultural Agent, Hot Springs, and Mr. H. C. Wells representing the Biological Survey in Rodent Control work.

Big Spring:

This week has been another wet one, rain having fallen on five days of the seven. During this time we have had a great deal of cloudy weather with a consequent low evaporation. The fields have been so wet that very little farm work could be done except we managed to plow a small block of stubble land on the sandy portion of the farm. Many of the farmers throughout the county state that the wet weather has caused a good deal of the milo heading

to blast. The roads throughout the county have been practically impassible most of the time the past two weeks. The weather has cleared this morning (Saturday) and we hope that we will now have some dry weather so we can catch up with the farm work. Maximum temperature for the week 87, minimum 60, wind velocity 3.4 miles, evaporation .96 of an inch and precipitation 1.85.

Edgeley:

Maximum temperature 92, minimum 39. No precipitation. Windy, dry weather continued throughout the week. All the oat plots on the main field have been threshed. The yield ranges from twenty-five to seventy-five bushels per acre. Corn is drying up. Not enough moisture is present in the soil for the growing corn to mature. As the wind is destroying so many of the leaves, the corn will be cut before the threshing is finished.

Garden City report for three weeks ending August 28:

The weather during the past three weeks has been rather cool for this time of the year. We have had but very little hot weather during the month of August. We have had some good rains in the meantime which was a great help to the corn and sorghums. There is enough moisture in the soil now for them to make and from present indications we are going to get some good yields.

The cowpeas were harvested during the past week and some of the fall plowing was done.

Messrs. Hallsted, Getty and Swanson from the Hays Experiment Station were visitors here on the 10th. The writer accompanied them on a visit to some of the southern stations.

Maximum temperature 92 degrees; minimum 44; total precipitation 2.10 inches.

Hays:

Maximum temperature for the week 88, minimum 52. Precipitation .19 inches. Generally the weather for the month of August has been very favorable for corn and all sorghum crops. Corn is beginning to harden and gives promise of the heaviest crop of grain since 1908. Kafir and milo, in fact, all sorghums are very good. The early varieties are about mature. Milo is about 40% mature and pink kafir is beginning to mature.

Generous rains during the month although good for the row crops, have delayed the commercial threshing a great deal. In some localities there is perhaps 50% of the wheat threshed but in other localities there is practically none threshed.

The rains have made conditions ideal for seed bed preparation for winter wheat. There is considerable volunteer on the plowed fields but there is sufficient time yet for the farmers to destroy volunteer and the Hessian fly it contains if they will get busy.

While the season has been generally good all over the state, the rains have been local and there are a few spots which have had less rain and the crops have suffered considerable from drouth. One of these less fortunate areas seems to be around Hutchinson. Corn has made a fairly good growth but has not eared well and the feed crops are shorter than usual in that part of the state.

Huntley:

The fore part of the week was devoted to the threshing of the Dry Land crops. Yields of winter wheat were fair to good with an average of 28.6 bushels per acre and testing 59 pounds per bushel. Spring grains were generally poor in quality and light in yield. The average for spring wheat was 12.4 bushels; oats 30.2 bushels; barley 15.1 bushels and flax 5.3 bushels. The straw yield for all crops was unusually high. With the exception of oats, the average yield of all grain crops was higher on disced corn ground than on summer fallow. And for oats the average yield from fall plowing was greater than that from fallow.

The first few days of the week were very hot and still but the last day or two have been windy and cold with occasional showers.

Maximum temperature for the week 103; minimum 51; precipitation .40".

Judith Basin:

Stormy weather during the latter part of the week put a stop to all field work just as we were ready to commence threshing winter wheat and will also delay the harvesting of spring wheat and barley. The rain has placed the ground in good condition for seeding winter wheat and also arrived at a very opportune time for corn and sunflowers, both of which were suffering seriously from lack of moisture.

The increase field of White Smyrna barley was harvested during the the week by using a binder with a header attachment. Hannchen barley on the increase fields is also so short that it will have to be cut in the same manner. Fall plowing for winter wheat on the rotations was completed but seedinghas been delayed by wet weather until next week. As yet practically no winter wheat has been seeded in the Judith Basin.

Mr. C. W. Warburton visited the station on the 22nd.

Maximum temperature for the week 93; minimum 46; precipitation .77".

Lawton:

Stalk counts were made this week on practically all sorghum and cotton plats. Seed heads were selected from several plats and most of the milo plats in rotations, as well as a number of kafir plats, were cut. Precipitation totalling 1.49" this week made it impossible to work in the fields a portion of the time, so grading was done around the machine shed and broomcorn was sorted. Broomcorn yields ranged from 440# to 860# brush per acre.

August has been cool and more hot weather is needed for cotton. This crop looks well but will require a long period of warm weather to make good yields.

Precipitation throughout June and July was less than onehalf of normal but we have had 4.10" to date in August, bringing the rainfall for the year about up to normal.

Maximum temperature 90; minimum 53; precipitation 1.49".

Mandan:

Horticulture.

The extremely hot and dry weather during the week has ripened up fruit and vegetables in a hurry and the whole force in the horticultural department has been kept busy in the work of harvesting. Twenty five bushels

Mandan, cont'd:

of tomatoes have been picked from the breeding plot, and some fifty selections of the most promising strains and hybrids have been made. The seed from these latter have been washed, and is being dried for future work.

Most of the Opata and Sapa plums are ripe and have been picked, and a selection of the best reserved for seed. The native plums are also beginning to ripen and a few of them have been selected for seed purposes.

Agronomy.

Threshing of grains in the rotations was completed on the 27th. While the yields per acre have not been worked out it is estimated that the average yield will not be over ten bushels per acre for wheat. Most of the continuously cropped plats were failures and fallow relatively poor. On the whole corn land has been showing the best yields. The highest yield in the rotations was nearly 18 bushels per acre in Rotation 570, in which three years of fallow preceded the crop.

Corn harvest is well under way and should be completed during the coming week. Cutting in the rotations has practically been completed. All but fallow and listed plats were badly dried up and in many cases there were no ears in consequence on such plats.

High winds have prevailed thruout most of the week, making threshing rather difficult. Continued dry weather is favorable to threshing but has caused much premature ripening of cultivated crops.

Maximum temperature 96 on the 24th; minimum 52 on the 24th; precipitation 0.

Arboriculture.

Hoeing has continued in the tree fields.

Tartarian and Ginnala maple seed has been picked amounting to about 75 pounds as it comes from the trees. The caragana seed planted two weeks ago in seedbeds is up and has received a second flooding. The seed planted a year ago in the seed beds is of good size and with plenty of water should be large enough for shipping next spring. When planted in the field it takes two summers to grow stock large enough for shipment.

Visitors during the week included Dr. Curtis F. Marbut, of the Office of Soil Survey; Mr. O. E. Baker of the Office of Farm Management; Mr. Stewart Lockwood of the North Dakota Agricultural College; Dr. Dorsey and Professor Beaumont of the Minnesota University.

Sheridan:

Hot dry weather continued throughout the most of the week with high winds for two half days. The last two days were cooler with a light shower, but not enough rain to help. The corn, sorghum and Sudan grass are drying badly. It will be necessary to harvest the Sudan grass, sorghum and a part of the corn in the variety field the first of the week and if there is no rain it will probably be necessary to harvest the rotation corn sometime during the week. With sufficient moisture in time, there would yet be a good crop of grain with the corn.

The greater part of the week was spent threshing oats and winter wheat. All of the oats in the rotations, rates and dates of seeding, and the 60 day variety were threshed. The threshing with the machine we have here proves to be a very slow job with the crop we have this year and with the large number of Russian thistles present in the grain it has been impossible to properly clean it.

Sheridan, cont'd:

The average yield of oats in the rotations was 45.3 bushels per acre. The highest yield was on 58-B, 66.6 bushels while the lowest was on 135-F, 30.3 bushels. The winter wheat in the rotations, the Turkey variety, and a part of the rates and dates of seeding were threshed. The average yield in the rotations was 27 bushels, the highest on 119-D, 34.5 bushels, and the lowest on MC-F, 13 bushels per acre.

Woodward:

The latter part of the week has been cloudy with very heavy fogs on two mornings, the entire week has been rather cool and we have had one small shower. Crops are making fair progress, though milo and kafir are still putting out a good many new heads, the kafir mostly from branches and the milo from suckers.

All of the CC and Method of Fallow broomcorn was pulled and seeded early in the week. The variety broomcorns on the Cereal Office project have been pulled and are being seeded today, the 28th. All of the fallow and the early fall plowed plots on the rotations have been springtoothed. A few small patches of wheat have been planted in various places to hold the soil from blowing. The last of the grape varieties were picked during the week. The two largest yields from individual vines were; Manito, an early grape, 23.5 pounds; and Last Rose, a late grape, 20 pounds. Other yields were varied from these down to nothing.

Maximum temperature for the week 92; minimum 55; average hourly wind velocity 5.2 miles per hour; evaporation 1.600; precipitation .24.

Bellefourche:

Threshing on the Dry Land Rotation was completed during the week. Yields of all crops except winter wheat were good. All grains except barley were below the legal standard of weight per bushel owing to the dry weather during the ripening period.

Spring wheat averaged 29.9 bushels per acre. The maximum yield was 35 bushels per acre on rotation 18, and the minimum 25.7 bushels per acre on rotation 2. The average weight per bushel was about 57 lbs. Winter wheat averaged 1.5 bushels per acre. Stem rust was responsible for the low yield. The winter wheat weighed about 40 lbs. per bushel. Oats averaged 63.8 per acre. The maximum yield of 80.8 bushels per acre was obtained on rotation 76. The minimum yield was 47.8 bushels per acre on rotation 31. Barley averaged 60.9 bushels per acre. The maximum yield was 66.4 bushels on plat A of the MC series. The minimum yield was 54.6 bushels per acre on rotation 7. The one plat of flax yielded 24.7.

Corn is suffering from drought but is far enough along so that a fair crop is assured. Many of the ears are now dented and the crop should be out of danger from frost within two weeks. A rain of .33 inch fell on the 27th. This is the first rain in several weeks and was of great benefit to the cultivated crops.

Maximum temperature for week 95; minimum 48.